

# Part I—Prelude

This book introduces you, the reader, to constrained optimization. This subject consists primarily of linear programs, their generalizations, and their uses. Part I prepares you for what is coming.

## **Chapter 1. Introduction to Linear Programs**

In this chapter, a linear program is described, and a simple linear program is solved graphically. Glimpses are provided of the uses to which linear programs can be put. The limitations that seem to be inherent in linear programs are identified, each with a pointer to the place in this book where it is skirted.

## **Chapter 2. Spreadsheet Computation**

Chapter 2 contains the facets of Excel that are used in this book. Also discussed in Chapter 2 is the software that accompanies this text. All of the information in it is helpful, and some of it is vital.

## **Chapter 3. Mathematical Preliminaries**

Presented in Chapter 3 is the mathematics on which an introductory account of linear programming rests. A familiar method for solving a system of linear equations is described as a sequence of “pivots.” An Excel Add-In can be used to execute these pivots.